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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/608,491

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Clifford Hannel

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SoCAL IP LAW GROUP LLP
310 N. WESTLAKE BLVD. STE 120
WESTLAKE VILLAGE, CA 91362

EXAMINER

BATES, KEVIN T

ART UNIT

PAPER NUMBER

2456

NOTIFICATION DATE

DELIVERY MODE

10/15/2010

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

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Office Action Summary	Application No. 10/608,491	Applicant(s) HANNEL ET AL.	
	Examiner KEVIN BATES	Art Unit 2456	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 November 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 28-36,38,39,41,42 and 44 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 28-36,38,39,41,42 and 44 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Response to Amendment

This Office Action is in response to a communication made on November 18, 2009.

Claims 1-27, 37, 40, and 43 have been cancelled.

Claims 28-36, 38-39, 41-42, and 44 are pending in this application.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 36-37, 39-40, and 42-44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tuomenoksa (7181542) in view of Ahlhard (7461157), and in further view of examiner's official notice.

Regarding claims 36, 37, and 42, Tuomenoksa teaches a method for allowing a computing device to access the capabilities of a network device via a virtual interface comprising:

the network testing system establishing over a first network a communication channel with the computing device (Col. 30, lines 45 – 57);

the network testing system associating a network interface of the network device with the communication channel (Col. 29, lines 57 – 65);

the network testing system receiving over a second network incoming data units directed to the network interface of the network device (Col. 31, lines 14 – 23);

the network testing system forwarding the incoming data units to the computing device via the communication channel (Col. 31, lines 14 – 23)

the network testing system providing the client computing device access to the capabilities of the network device of the network testing system via the network interface including:

receiving via the communication channel outgoing data unit requests from the computing device, the outgoing data unit requests including an identifier of a specified network interface (Column 10, lines 17 – 31);

transmitting outgoing data units pursuant to the outgoing data unit requests onto the second network via the specified network interface (Column 8, lines 55 – 67).

Tuomenoksa does not explicitly indicate the second computing device processing a start request to establish a communication channel to the first computing device on a first network through the network device

the network testing system receiving a mirror request from the first computing device over the communication channel on the first network, the mirror request specifying the network device

the network testing system sending a request granted packet to the first computing device over the communication channel or

the network testing system transmitting outgoing data units pursuant to the outgoing data unit requests onto a second network via the specified network interface at

protocol not supported by the client computing device and/or at a throughput not possible at the client computing device.

Ahlard teaches a system for establishing network tunnels that includes the client initiating the connection and requesting the establishment of the tunnel, the server granting the tunnel request, and the client establishing the tunnel (Col. 5, line 55 – Col. 6, line 10; Col. 6, line 39 – 48; Col. 4, line 14-15).

It would have been obvious to one of skill in the art at the time the invention was made to use Ahlard's teaching of allowing the client communicate directly with the tunnel destination to simply the process of creating the secure tunnel in Tuomenoka.

Examiner takes Official Notice (see MPEP § 2144.03) that "a network card can be programmed to perform the functions as described in claim 42, instead of just emulating a network card as disclosed in Tuomenoska (see Col. 15, lines 23 – 29)".

It would have been obvious to one of ordinary skill in the art at the time to implement Tuomenoska's emulated card in hardware to provide a speedier dedicated hardware support for those functions.

Acharya teaches that after traveling through tunnels the packets received must be assembled by the egress gateway of the tunnel (Col. 7, lines 32 – 40) and that the formatting must be based on at least some parameters in the packets in case the second network supports a separate protocol (Co. 8, lines 11 – 24).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use Acharya's teaching of formatting and assembly packets

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traveling through tunnels to overcome any problem of formats of different devices and networks.

Regarding claims 38, 41, and 44, Tuomenoksa teaches the method of claims 36, 39, and 42 wherein the establishing the communication channel includes using a transmission control protocol (TCP) socket to create a tunnel (Fig 15).

Claims 28-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tuomenoksa in view of Ahlard, and in view of Aysan (7379465) and Acharya (6894999) and in further view of examiner's official notice.

Regarding claims 28 and 32, Tuomenoksa teaches a system comprising:

a first computing device coupled to a first network (Col. 3, lines 41 – 44; the first processor);

a network testing system having a network device included therein, the network device coupled to a second network, the second computing device coupled to the first network (Col. 3, lines 41 – 44, where the second network device is the additional processor; see also Figure 15), the second computing device including software which when executed causes the second computing device to perform operations comprising:

accepting a connection request from the first computing device over a communication channel on the first network (Col. 3, lines 44 – 50), the connection request causing the second computing device to wait on the communication channel for additional request from the first computing device;

forwarding to the first computing device via the communication channel incoming data units received by the network device over the second network (Col. 3, lines 44 – 50),

receiving from the first computing device via the communication channel outgoing data unit requests to send outgoing data units onto the second network via the network device (Col. 3, lines 55 – 59).

Tuomenoksa does not explicitly indicate the second computing device processing a start request to establish a communication channel to the first computing device on a first network through the network device

the second computing device receiving a mirror request from the first computing device over the communication channel on the first network, the mirror request specifying the network device

the second computing device sending a request granted packet to the first computing device over the communication channel;

the hardware interface device at one of a speed greater than that available at the client computing device and/or using a protocol not supported by the client computing device and/or at a throughput not possible at the client computing device.

Ahlard teaches a system for establishing network tunnels that includes the client initiating the connection and requesting the establishment of the tunnel, the server granting the tunnel request, and the client establishing the tunnel (Col. 5, line 55 – Col. 6, line 10; Col. 6, line 39 – 48; Col. 4, line 14-15).

It would have been obvious to one of skill in the art at the time the invention was made to use Ahlard's teaching of allowing the client communicate directly with the tunnel destination to simply the process of creating the secure tunnel in Tuomenoka.

Toumensoksa does not explicitly indicate that the incoming packets are addressed to the network device as a destination or the outgoing packets requests include packet assembly parameters.

Aysan teaches a system for addressing packets to tunneled connection that includes addressing packets to the public interface at the entry point of the tunnel, which then gets forwarded through the tunnel to the destination (Col. 7, lines 48 - 54; Col. 8, lines 28 - 49).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use Aysan's teaching of tunnel addressing in Toumensoksa overcome the problem of too many tunnels sharing actual or virtual addresses.

Acharya teaches that after traveling through tunnels the packets received must be assembled by the egress gateway of the tunnel (Col. 7, lines 32 – 40) and that the formatting must be based on at least some parameters in the packets in case the second network supports a separate protocol (Co. 8, lines 11 – 24).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use Acharya's teaching of formatting and assembly packets traveling through tunnels to overcome any problem of formats of different devices and networks.

Examiner takes Official Notice (see MPEP § 2144.03) that "a network card can be programmed to perform the functions as described in claim 42, instead of just emulating a network card as disclosed in Tuomenoska (see Col. 15, lines 23 – 29)".

It would have been obvious to one of ordinary skill in the art at the time to implement Tuomenoska's emulated card in hardware to provide a speedier dedicated hardware support for those functions.

Regarding claim 29, Tuomenoksa teaches the system of claim 28 wherein the communication channel is a tunnel (Col. 3, lines 44 – 50; see also Fig. 15).

Regarding claim 30, Tuomenoksa teaches the system of claim 29 wherein the first computing device includes a first tunnel device and the second computing device includes a second tunnel device, the tunnel established between the first tunnel device and the second tunnel device (Fig. 15).

Regarding claim 33, Tuomenoksa teaches the system of claim 32 wherein the first computing device includes a first communication device and the second computing device includes a second communication device, the communication channel established between the first communication device and the second communication device (Col. 3, lines 44 – 50).

Regarding claims 31 and 34, Tuomenoksa teaches the system of claims 30 and 33 wherein the first tunnel device and the second tunnel device are each network interface devices (Fig. 15).

Regarding claim 35, Tuomenoksa teaches the system of claim 32 wherein the first network is an Ethernet network (Col. 11, lines 27 – 44; Col 31, line 49).

Response to Arguments

Applicant's arguments filed July 23, 2009 have been fully considered but they are not persuasive. The applicant argues that the combination of Tuomenoksa and Ahlard does not disclose the hardware interface device at one of a speed greater than that available at the client computing device and/or using a protocol not supported by the client computing device and/or at a throughput not possible at the client computing device. The examiner has amended the rejection to show that the previously added reference, Acharya, discloses implementing a VLAN tunnel as disclosed in Tuomenoksa and Ahlard the tunnel to function with networks of different protocols and data rates. See Acharya, Col. 8, lines 11 - 13. It would be obvious to one of ordinary skill in the art when one was implementing the tunnel before formed as taught in Tuomenoksa and Ahlard to be designed to implement the flexibility of Acharya's teaching of tunnels to include a connection which support different rates and protocols than what might be supported in a first network the tunnel traverses.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to KEVIN BATES whose telephone number is (571)272-3980. The examiner can normally be reached on M-F 8 am - 5 pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rupal Dharia can be reached on (571) 272-3880. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/KEVIN BATES/

Primary Examiner, Art Unit 2456